CLAIMS

1. A computer implemented method of analyzing an acoustical signal, comprising:

inputting the acoustical signal;

extracting a set of intrinsic mode functions from the acoustical signal; and

storing said set of intrinsic mode functions of the acoustical signal.

2. The computer implemented method according to claim 1, further comprising:

identifying a specific acoustical signal.

3. The computer implemented method according to claim 2, wherein said specific acoustical signal is identified in said set of intrinsic mode functions.

4. The computer implemented according to claim 2, wherein said specific acoustical signal is noise.

5. The computer implemented method according to claim 2, further comprising:

removing said specific acoustical signal from said set of intrinsic mode functions; and

reconstructing the acoustical signal.

6. The computer implemented method according to claim 5, wherein reconstructing the acoustical signal includes summing up said set of intrinsic mode function.

7. A computer implemented method of analyzing an acoustical signal, comprising:

inputting the acoustical signal;

extracting a set of intrinsic mode functions from the acoustical signal;

storing said set of intrinsic mode functions of the acoustical signal; and

transforming said set of intrinsic mode functions with a Hilbert transform to generate a Hilbert spectrum.

8. The computer implemented method 1 according to claim 7, further comprising:

identifying a specific acoustical signal in the Hilbert spectrum.

9. The computer implemented method according to claim 8, wherein said specific acoustical signal is noise.

10. The computer implemented method according to claim 8, further comprising:

storing the Hilbert spectrum.

11. The computer implemented method according to claim 8, further comprising:

removing said specific acoustical signal from said set of intrinsic mode functions; and

reconstructing the acoustical signal.

12. The computer implemented method according to claim 11, wherein reconstructing the acoustical signal includes summing up said set of intrinsic mode function.

13. A computer implemented method of analyzing an acoustical signal, comprising:

inputting a first acoustical signal;

extracting a first set of intrinsic mode functions from the first acoustical signal;

transforming said first set of intrinsic mode functions with a Hilbert transform to generate a first Hilbert spectrum; and

storing said first Hilbert spectrum.

14. The computer implemented method according to claim 13, wherein the first acoustical signal is generated from a first human voice source.

15. A computer implemented method according to claim 13, comprising:

inputting a second acoustical signal;

extracting a second set of intrinsic mode functions from the second acoustical signal;

transforming said second set of intrinsic mode functions with a Hilbert transform to generate a seconfd Hilbert spectrum;

storing said second Hilbert spectrum of the second acoustical signal; and

comparing said first and second Hilbert spectra.

16. The computer implemented method according to claim 15, wherein the second acoustical signal is generated from a second human voice source.

17. The computer implemented method according to claim 15, wherein the step of comparing said first and second Hilbert spectra includes obtaining a correlation coefficient between said Hilbert spectra.

18. The computer implemented method according to claim 13, further comprising:

providing a second Hilbert spectrum; and

comparing said first and second Hilbert spectra.

19. The computer implemented method according to claim 18, wherein the step of providing the Hilbert spectrum of the specific acoustical signal includes retrieving said second Hilbert spectrum from a database.

20. The computer implemented method to claim 18, wherein the step of comparing said first and second Hilbert spectra includes obtaining a correlation coefficient between said Hilbert spectra.